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Filed : September 11, 2003

## REMARKS

Claims 1, 9, and 13-16 have been amended. Support for the amendments can be found throughout the Specification as filed, as discussed below. No new matter has been introduced by these amendments. The following addresses the substance of the Office Action.

### Definiteness

The Examiner has rejected Claims 9 and 13-15 under 35 USC §112, second paragraph, as being indefinite. More specifically, Claim 9 was rejected for reciting the phrase “agent of interest”, which is not defined in the Specification as filed. Claim 9 has now been amended to recite “potential drug” which has support in the Specification, on page 11, paragraph [0048]. Claim 14 was rejected for reciting “enzymatic activities on the specific location are assayed”, wherein which enzymatic activities are meant: cellular or siRNA, is unclear. Claim 14 has been additionally rejected for lacking antecedent basis for the phrase “wherein enzymatic activities”. Claim 14 has now been amended to recite “wherein the cells are assayed for”. Claim 13 has been rejected for lacking antecedent basis for the phrase “wherein specific proteins”. Claim 13 has now been amended to recite “wherein the cells are assayed”. Claim 15 has been rejected for lacking antecedent basis for the phrase “wherein one or more specific mRNAs”. Claim 15 has now been amended to recite “wherein the cells are assayed”. Support for the amendments in Claims 13-15 can be found on page 11, paragraph [0046] of the Specification as filed.

Therefore, Claims 9, and 13-15 are now definite and their rejection under 35 USC §112, second paragraph should be withdrawn.

### Novelty

The Examiner has rejected Claims 1-6, and 8-13 under 35 USC §102(b) as being allegedly anticipated by Harborth et al. (Journal of Cell Science 114:4557-4565, 2001). Applicant respectfully disagrees.

The rule is that to be anticipatory under 35 U.S.C. § 102, a reference must teach each and every element of the claimed invention. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). “Invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference. ...There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of

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ordinary skill in the field of the invention." *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991).

The present inventors found that prior immobilization of siRNAs before addition of the cells makes possible a high throughput analysis of the samples. Further, the inventors found that after addition of cells to the immobilized siRNA, the cells do not require culturing, as mere "Proliferation in the sense that at least cellular activities are allowed to continue" ([0045]) has proven to be sufficient. Claim 1 as currently amended teaches that siRNA species are immobilized on the support prior to plating cells on such support. Support for this amendment can be found in paragraphs [0016], [0026]-[0027], [0033]-[0036], and [0041].

Harborth describes identification of essential genes, e.g., responsible for phenotypes, in cultured mammalian cells using siRNAs. Human cells and rat fibroblasts were transferred to 24-well plates, infected with siRNAs by incubating these cultured cells in solution containing siRNAs, cultured and assayed. Harborth does not describe immobilizing siRNA on a support prior to plating cells on said support. Therefore, Harborth et al. does not anticipate 1-6, and 8-13.

The Examiner has rejected Claims 1, 4, 8, and 15 under 35 USC §102(b) as being allegedly anticipated by Caplen et al. (Gene 253:95-105, 2000). Applicant respectfully disagrees. Caplen et al. describe siRNA mediated gene silencing in cultured *Drosophila* cells. The *Drosophila* cells are cultured, transfected with siRNA-containing solution, and cultivated. The RNA was then isolated and assayed by Northern blot. Caplen does not describe immobilizing siRNA on a support prior to plating cells on said support. Therefore, Caplen et al. does not anticipate claims 1, 4, 8, and 15.

The Examiner has rejected Claims 1-6, 8, 10, 11, and 15 under 35 USC §102(b) as being allegedly anticipated by McManus et al. (RNA, 8:842-850, 2002). Applicant respectfully disagrees. McManus describes mixing cells with siRNA in solution in electrode gap cuvette for electroporation and then plating the electroporated cells into six-well plates; McManus also describes plating cells first in six-well plates and then adding siRNA in solution to these cells for transfections. MacManus does not describe immobilizing siRNA on a support prior to plating cells on said support. Therefore, MacManus et al. does not anticipate claims 1-6, 8, 10, 11, and 15.

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The Examiner has rejected Claims 1-6, 8, 10-14, 16 and 17 under 35 USC §102(b) as being allegedly anticipated by Fosnaugh et al. (US 2003/0148507). Applicant respectfully disagrees. Fosnaugh describes siRNAs, capable of modulating gene expression of prostaglandin D2 receptor/synthetase. Fosnaugh describes synthesizing such siRNAs on a solid support. The synthesized siRNAs are then dissolved and added to lung epithelial cells cultured in six-well dishes (see page 30, paragraphs [0265]-[0267]). Fosnaugh does not describe immobilizing siRNA on a support prior to plating cells on said support. Therefore, Fosnaugh et al. does not anticipate claims 1-6, 8, 10-14, 16 and 17.

The Examiner has rejected Claims 1-4, 7-11, and 13 under 35 USC §102(b) as being allegedly anticipated by Tzertzinis et al. (US 2004/0038278). Applicant respectfully disagrees. Tzertzinis describes a method of obtaining a mixture of RNA species suitable for use in gene silencing. Insect or mammalian cells containing luciferase gene were plated for transfection with siRNAs in 24-well plates. After transfection, the cells were proliferated and cells were processed for performing a luciferase assay. Tzertzinis does not describe immobilizing siRNA on a support prior to plating cells on said support. Therefore, Tzertzinis et al. does not anticipate claims 1-4, 7-11, and 13.

For all of the above reasons, Applicants respectfully request withdrawal of all rejections under 35 U.S.C. § 102, and allowance of the pending application.

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### CONCLUSION

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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